NAVAJO GENERATING STATION
P.O. Box 850
Page, AZ 86040
(928) 645-6217
Fax (928) 645-7298

ROBERT K. TALBOT
Manager

March 31, 2015

Mr. Stephen B. Etsitty, Executive Director
Navajo Nation Air Quality/Operating Permit Program
RT 112 North, Building #2427
PO Box 529
Fort Defiance, Arizona 86504

Re: ***Addendum to Title V Renewal Application***
Navajo Generating Station
Permit No. NN-ROP 05-06

Dear Mr. Etsitty:

Enclosed is an addendum to the Renewal Application for the Salt River Project (SRP) Navajo Generating Station's (NGS) Title V air quality permit, initially submitted in January 2013. This addendum application proposes to incorporate the applicable mercury provisions of the Mercury Air Toxics (MATS) Rule in 40 CFR Part 63, Subpart UUUUUU for which NGS has a compliance date of April 16, 2016. Additionally, with this application, SRP is requesting that the quarterly performance testing monitoring option provided under the MATS Rule for particulate matter be incorporated into the permit. A separate addendum to the Title V Renewal Application was submitted in January 2015 to incorporate all other applicable non-mercury provisions of the MATS Rule.

If you have any questions regarding this application submittal, please contact Barbara Cenalmor at (602) 236-2322 or me at (928) 645-6217.

Sincerely,

Robert Talbot, Manager
Navajo Generating Station

cc w/attachment: Gerardo Rios, EPA Region IX
Paul Ostapuk, NGS
LOC 6-2-7.5

Gerardo C. Rios, Chief
Air Division Permits Office (AIR-3)
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

ADDENDUM TO TITLE V RENEWAL

SALT RIVER PROJECT
NAVAJO GENERATING STATION
PART 71 AIR PERMIT NN-ROP 05-06

Submitted to:
Navajo Nation Environmental Protection Agency
Operating Permit Program
RT 112 North Building #2427
Fort Defiance, Arizona 86504

Prepared by:
Salt River Project
P.O. Box 52025, PAB 352
Phoenix, AZ 85072-2025

March 2015

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List of Appendices

1.0 Executive Summary

The Navajo Generating Station (NGS) is a pulverized coal steam electric generating facility that is operated by the Salt River Project Agricultural Improvement and Power District (SRP). NGS is a major stationary source of air emissions operating under a Part 71 Air Permit NN-ROP 05-06 issued by the Navajo Nation Environmental Protection Agency (NNEPA) on July 3, 2009. This permit was valid until July 3, 2013 and SRP applied for the permit renewal on January 3, 2013.

NGS consists of three generating units, designated as Units 1, 2 and 3, which produce a combined electrical output of 2,250 net megawatts. All three generating units at NGS are subject to the federal Mercury and Air Toxics Standard (MATS) contained in Title 40 of the Code of Federal Regulations (CFR) Part 63 Subpart UUUUU. The MATS rule requires that affected facilities meet strict emission standards for mercury (Hg), filterable particulate matter (PM), individual non-Hg metal Hazardous Air Pollutants (HAPs), total non-Hg metal HAPs, and hydrochloric acid gas (HCl) by April 16, 2015. To provide sufficient time for SRP to evaluate and install the necessary controls required to comply with the Hg emission limits of the MATS rule, the Navajo Nation Environmental Protection Agency (NNEPA) and the Environmental Protection Agency (EPA) granted SRP a one-year extension (until April 16, 2016) to comply with the provisions pertaining to Hg. This one year extension was granted provided SRP meet the following compliance schedule:

1. Submit to NNEPA a Title V permit modification application that incorporates the final Hg control strategy by no later than April 1, 2015,
2. Commence Construction to incorporate the Hg control strategy on-site by no later than October 1, 2015; and
3. Complete on-site construction and comply with all Hg provisions of the MATS rule by no later than April 16, 2016.

Since the issuance of the MATS rule, SRP has evaluated and tested several Hg control technologies to determine each technology's feasibility with meeting the MATS Hg emission limits. From that evaluation, SRP has identified that a combination of calcium bromide application and powder activated carbon (PAC) injection is the preferred control strategy. Implementation of these technologies will require the installation of calcium bromide and PAC storage and handling equipment.

SRP is submitting this addendum to the Title V renewal application submitted in January of 2013 to authorize the mercury control equipment and to incorporate the applicable mercury provisions of the MATS rule.

Additionally, in January 2015, SRP submitted an addendum to the 2013 Title V renewal application to incorporate the applicable non-mercury provisions of the MATS rule. That addendum indicated that SRP would monitor PM emissions from the NGS units using

PM Continuous Emissions Monitors (CEMS). As of the date of this application, NGS has not been able to resolve maintenance issues with the PM CEMS installed at the plant, and additional time is necessary to work the issues with the vendor and manufacturer of the CEMS. Therefore, SRP is requesting that the quarterly performance testing monitoring option be incorporated into the permit so that compliance can be demonstrated through testing until such a time as the PM CEMS problems are resolved. A summary of the additional applicable requirements pertaining to this monitoring option are included in Table 4-2.

2.0 Project Description

The proposed mercury control system will consist of new calcium bromide application system and a new PAC injection system. Details of each system are contained in the following subsections. For reference, process flow diagrams identifying all proposed processing equipment associated with the mercury control systems are contained in Appendix B.

Calcium Bromide Application System

The calcium bromide application system will consist of the following major equipment:

- One (1) 60,000 gallon main calcium bromide heated storage tank with level indication and containment area
- One (1) recirculation pump capable of filling all three day tanks and to serve as a spare transfer pump
- Two (2) transfer pumps capable of filling all three day tanks
- Three (3) 4,500 gallon day tanks with level indication and containment area
- Three (3) feed pumps per day tank. Three operating and 1 spare with individual discharge piping.

Liquid calcium bromide will be truck delivered into the main storage tank. The calcium bromide will be transferred to each unit's day tank via dedicated transfer pumps. From the day tanks, calcium bromide will applied to the coal directly at the each existing pulverizer feeder.

No air emissions are anticipated from the calcium bromide application system.

PAC Injection System

The PAC injection system will consist of the following major equipment:

- Two (2) 40 ton storage silos with dust collectors.
- Two (2) feed tank containing PAC slurry
- Two (2) forwarding pump skid containing two (2) forwarding pumps each feeding the slurry to each absorber as necessary based on blow down rates of the absorber.

PAC will be truck delivered into the main storage silos for bulk storage. From the storage silos, the PAC will be mixed with water creating a PAC slurry and subsequently transferred to the feed tank. PAC slurry will be fed to each absorber as needed.

Particulate matter emissions are anticipated from the unloading of PAC into the storage silos.

3.0 Emission Sources

The proposed PAC storage silo dust collectors are anticipated to be sources of particulate matter (PM, PM_{10}, and $PM_{2.5}$) emissions. Potential emissions for the baghouses are calculated using flow rate and particulate grain loading rates based on manufacturer specification data and assuming 8,760 hours of operation per year. Detailed emission calculations for the baghouses are included in Table C.1 of Appendix C.

Because the potential to emit from the silos for PM, PM_{10}, and $PM_{2.5}$ are less than 2.0 tons per year, the silos are considered insignificant activities per 40 CFR 71.5(c)(11)(ii). As a result, Form IE has been updated to include the insignificant activity. The revised form IE is included in Appendix E.

4.0 Regulatory Applicability Analysis

Units 1, 2 and 3 at NGS are coal fired EGUs subject to the MATS rule. SRP requests with this addendum that all applicable MATS requirements pertaining to mercury, including emissions limits, controls, monitoring, recordkeeping, and reporting requirements, be incorporated into Permit NN-ROP 05-06.

Citations for the MATS provisions specific to mercury and applicable to Units 1, 2, and 3 are summarized Table 4.1 below:

TABLE 4.1 MERCURY PROVISIONS

Citation	Description	Compliance Methodology
When do I have to comply with this subpart?		
40 CFR 63.9984(b)	For existing EGUs, comply with the MATS rule by April 16, 2015. Per the one year extension letter granted to NGS (see Appendix A), the compliance date for Hg provisions is April 16, 2016.	NGS will comply with the mercury provisions of Subpart UUUUU no later than April 16, 2016.
40 CFR 63.9984(f)	Demonstrate compliance by conducting required performance tests and other activities, no later than 180 days after the applicable date in paragraph (b).	NGS will demonstrate that compliance has been achieved with the mercury provisions of Subpart UUUUU by conducting tests and performance evaluations no later than 180 days after April 16, 2016.
What emission limitations, work practice standards, and operating limits must I meet?		
40 CFR 63.9991(a)	Meet emission limits and work practice standards in Table 2 through 4.	Units 1, 2 and 3 at NGS are classified as existing coal-fired EGUs and will meet the limits of Tables 2 through 4 of UUUUU.
Table 2 of UUUUU	Hg Emission Limits for Existing EGUs: • Hg: 1.2 lb/TBtu or $1.3e^{-2}$ lb/GWh,	NGS will comply with the mercury emission limits in Table 2
Table 3 of UUUUU	Work Practice Standards: • Startup: Operate all CMS during startup. Use clean fuels and engage all applicable control technologies. Comply with all applicable emission limits at all times except during startup and shutdown and provide reports concerning activities and periods of startup.	NGS will comply with the work practices of Table 3 during startup and shutdown.

TABLE 4.1 MERCURY PROVISIONS		
Citation	**Description**	**Compliance Methodology**
	• Shutdown: Operate all CMS during shutdown. During shutdown, NGS must operate all applicable control technologies while firing coal. Comply with all applicable emission limits at all times except during startup and shutdown and provide reports concerning activities and periods of shutdown.	
What are my general requirements for complying with this subpart?		
40 CFR 63.10000(a), (b),	• Limits apply at all times except during periods of startup and shutdown but during these periods, work practice standards of Table 3 apply. • At all times, operate and maintain air pollution control equipment and monitoring equipment in a manner consistent with safety and good air pollution control practices.	NGS will operate Hg air pollution control equipment and monitoring equipment in a manner consistent with safety and good air pollution control practices
40 CFR 63.10000 (c)(1)(vi)	If not qualifying for low emitting EGU (LEE) for Hg, compliance must be demonstrated through use of an Hg CEMS or a sorbent trap monitoring system in accordance with 40 CFR 63 Subpart UUUUU Appendix A.	NGS will demonstrate compliance with the emission limits by sorbent trap monitoring systems at each stack.
40 CFR 63.10000 (c)(1)(vi)(A),(B)	Two options are provided for demonstrating compliance using sorbent traps: 1) Use of two separate sorbent traps in which one trap is used during non startup/shutdown periods to demonstrate compliance with emission limits and one trap is used during startup/shutdown periods. 2) Use of one trap and demonstrate compliance with emission limits at all times.	NGS will demonstrate compliance through use of a single or dual sorbent trap monitoring system at each stack.
What are my initial compliance requirements and by what date must I conduct them?		
40 CFR 63.10005(a),(d)(3)	Initial compliance must be demonstrated with the limits in Table 2. Where two emission limits are specified (heat input based limit or electrical output based limit), compliance may be demonstrated with either. Compliance must be	Initial compliance will be demonstrated by an initial performance test consisting of 30 boiler operating days of data collected with the sorbent trap monitoring systems; the demonstration will be completed by October 16, 2016

TABLE 4.1 MERCURY PROVISIONS		
Citation	**Description**	**Compliance Methodology**
	demonstrated no later than 180 days after the compliance date.	(180 days after the extended compliance date) .
40 CFR 63.10005 (a)(2)	Initial performance tests using CEMS or sorbent traps consist of 30 boiler operating days of data collected by the initial compliance demonstration date (Oct. 16, 2016).	Initial compliance will be demonstrated by an initial performance test consisting of 30 boiler operating days of data collected with the sorbent trap systems; the demonstration will be completed by October 16, 2016 (180 days after the extended compliance date).
40 CFR 63.10005(d)(3)	If using sorbent traps for compliance, the sorbent traps have to pass a performance evaluation (certification) prior to the initial compliance demonstration date.	NGS will certify, operate, and maintain the sorbent traps in accordance with 40 CFR 63 Subpart UUUUU Appendix A.
40 CFR 63.10005 (j)	You must follow the work practice standards of Table 3 for startup and shutdown.	NGS will comply with the work practices of Table 3 during startup and shutdown periods
40 CFR 63.10005 (k)	You must submit a Notification of Compliance Status summarizing the results of the initial compliance demonstration.	NGS will submit a Notification of Compliance Status.
What methods and other procedures must I use for the performance tests?		
40 CFR 63.10007(b)	30-boiler operating day tests based on sorbent trap systems must be conducted in accordance with the requirements of Table 5.	NGS will follow the requirements of Table 5.
40 CFR 63.10007 (e)(2), (3)	Methodologies for demonstrating compliance with either the lb/MMBtu or lb/MWh limits.	NGS will follow the procedures described in this section when demonstrating compliance with either the input-based or output-based limits.
40 CFR 63.10007 (f)	Diluent cap and default electric load values for calculating emissions during startup and shutdown periods	NGS will use the diluent cap and default electric load values provided for calculating emissions during startup and shutdown.
40 CFR 63.10007 (g)	Upon request, records shall be made available to EPA to determine whether the performance tests have been done according to the requirements of 63.10007.	Records shall be made available if requested.
May I use emissions averaging to comply with this subpart?		
40 CFR 63.10009(a) through (e),	Emission averaging for Hg is provided if averaged Hg emissions are equal to or less than 1.0 lb/TBtu or 1.1E-2 lb/GWh on a 90-boiler operating day basis. Per the MATS	NGS may chose to average emissions from Units 1, 2 and 3 to determine compliance with the 30- or 90-boiler operating day Hg limits using data collected by the

TABLE 4.1 MERCURY PROVISIONS		
Citation	**Description**	**Compliance Methodology**
(f)(1),(h)	Technical Correction proposed in February 2015, facilities are also provided a 30-boiler operating day averaging period for Hg using the emission limits in Table 2. Compliance may be demonstrated by emissions averaging if using CEMS or sorbent traps. The weighted average emissions rate has to be calculated using data from all units including any that operate fewer than 30 (or 90) days during the preceding 30 (or 90) group boiler days.	sorbent traps. NGS will use the calculations in 63.1009(b) to determine group eligibility.
40 CFR 63.10009 (g)	The weighted average emission rate must be determined in accordance with 63.10009(g).	NGS will determine the weighted average emisison rate in accordance with 63.10009(g).
40 CFR 63.10009 (j)	If using emissions averaging to determine compliance, an Emissions Averaging Plan must be developed in accordance with 63.10009(j), and submitted to the Director if requested.	If NGS elects to use emissions averaging for compliance determinations, an Emissions Averaging Plan will be prepared by the required date.
What are my monitoring, installation, operation, and maintenance requirements?		
40 CFR 63.10010(a)(1)	Sorbent trap monitoring systems must be installed in the stack or at a location in the ductwork downstream of all emissions control devices, where the pollutant and diluents concentrations are representative of the emissions that exit to the atmosphere.	All sorbent trap monitoring systems will be installed as required by Subpart UUUUU
40 CFR 63.10010 (c),(d),(g)	Installation, certification, maintenance and operation requirements for sorbent trap monitoring systems and stack gas flow monitor or moisture monitoring systems.	Sorbent traps and stack flow monitors will be used to determine compliance, and they will be certified, operated and quality assured as required in Subpart UUUUU.
How do I demonstrate initial compliance with the emissions limits and work practice standards?		
40 CFR 63.10011(c)(1)	If using sorbent traps to measure Hg emissions for initial compliance, the first 30 boiler operating day average emission rate obtained with certified sorbent traps after the the compliance date is the initial performance test.	NGS will demonstrate initial compliance by an initial test consisting of the first 30-boiler operating day rolling average emission rate obtained by certified sorbent traps after the compliance date.
40 CFR 63.10011(e)	A Notification of Compliance Status must be submitted with the results from the initial compliance demonstration.	A Notification of Compliance Status will be submitted by the due date.
40 CFR	For periods of startup and shutdown, determine the fuel whose	NGS will use clean fuel during periods of startup and

TABLE 4.1 MERCURY PROVISIONS		
Citation	**Description**	**Compliance Methodology**
63.10011(f),(g)	combustion produces the least uncontrolled emissions, that is available on site or nearby. Follow the startup and shutdown requirements of Table 3.	shutdown, and will follow the requirements in Table 3.
How do I monitor and collect data to demonstrate continuous compliance?		
40 CFR 63.10020(a),(b)	Operate the monitoring systems and collect data except for periods of malfunction or out-of-control periods, and conduct required QA activities.	Monitoring systems will be operated and data will be collected at all times as required by Subpart UUUUU.
40 CFR 63.10020(c), (d)	Data recorded during startup, shutdown, monitoring system malfunction or out-of-control periods, repairs associated with monitoring system malfunction or out-of-control periods, or required monitoring system Q/A or control activities may not be used in calculations used to report emissions or operating levels, except as otherwise provided in 40 CFR 63.10000(c)(1)(vi)(B). Except for those periods, failure to collect required data is a deviation from the monitoring requirements.	Data will be collected at all times as required by Subpart UUUUU.
How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?		
40 CFR 63.10021(a)	Compliance must be demonstrated with each emission limit and work practice standard in Tables 2 and 3, according with the monitoring specified in Table 7 and subsections of 63.10021.	Continuous compliance with the Hg limits will be demonstrated by using sorbent traps.
40 CFR 63.10021 (b)	Demonstrate continuous compliance by using all quality-assured hourly data recorded sorbent trap monitoring systems and other required monitoring systems to calculate the arithmetic average emission rate in units of the standard on a continuous 30-boiler operating day rolling average basis, updated at the end of each new boiler operating day, using Equation 8.	Continuous compliance with the Hg limits will be demonstrated by using sorbent traps.
40 CFR 63.10021 (g)	Report each instance in which the emissions limits or operating limits were not met, or owner/operator failed to conduct a tune-up.	Deviation reports will be submitted as required.

TABLE 4.1 MERCURY PROVISIONS		
Citation	**Description**	**Compliance Methodology**
40 CFR 63.10021(h), (i)	Keep records during startup and shutdown, and provide reports of such periods as required in 63.10031.	Startup and shutdown recording and reporting requirements will be met.
How do I demonstrate continuous compliance under the emissions averaging provision?		
40 CFR 63.10022(a)(1), (b)	For each 30-day rolling average period, demonstrate compliance with the average weighted emissions limit as determined in 63.10009(f) and (g). Instances of non-compliance with the continuous monitoring requirements are deviations.	Compliance with the average weighted emissions limit will be demonstrated for each 30-day rolling average period. Failing to comply with the continuous monitoring requirements will be a deviation.
What notifications must I submit and when?		
40 CFR 63.10030(a), (d)	Submit all notifications required under 63.7(b), (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h), as applicable.	All notifications will be submitted as required by this section , and according to 63.9(h)(2)(ii). A Notification of Intent to conduct a performance test will be submitted at least 30 days before the test is scheduled to begin as required in 63.10030(d).
40 CFR 63.10030(e)	Notification of Compliance Status.	A Notification of Compliance Status will be submitted including all the information specified in 63.10031(e).
What reports must I submit and when?		
40 CFR 63.10031(f)	Results of performance tests and compliance reports will be submitted to WebFIRE or ECMPS, as required.	Reports required by this section will be submitted to the Director and EPA.
What records must I keep?		
40 CFR 63.10032(a)	Keep records of all notifications and reports submitted to comply with Subpart UUUUU as well as records of tests, fuel analyses or other compliance demonstrations, including performance evaluations.	All the records required by this section will be kept.
40 CFR 63.10032(b)	Maintain CEMS records including those required by 63.10(b)(2)(vi) thorugh (xi). Keep records of previous versions of the performance evaluation plan, requests for alternatives to RATA and records of deviations.	All the records required by this section will be kept.
40 CFR 63.10032(c)	Maintain the records required in Table 7, including all monitoring data and calculated averages.	All the records required by this section will be kept.
40 CFR	Maintain records of monthly fuel use and fuel type.	All the records required by this section will be kept.

TABLE 4.1 MERCURY PROVISIONS		
Citation	**Description**	**Compliance Methodology**
63.10032(d)		
40 CFR 63.10032(e)	Keep a copy of the emissions averaging implementation plan (Emissions Averaging Plan), and all calculations.	All the records required by this section will be kept.
40 CFR 63.10032(f), (g), (h), (i)	Maintain records of startups and shutdowns and fuel used during these periods. Document malfunctions, including actions taken to minimize emissions during malfunctions.	All the records required by this section will be kept.
In what form and how long must I keep my records?		
40 CFR 63.10033	Maintain records for 5 years. At least 2 years of records must be kept on site.	Records will be kept for 5 years and at least 2 years of those will be kept on site.

SRP also requests with this addendum that the quarterly PM performance testing monitoring option be incorporated into Permit NN-ROP 05-06. Citations for the MATS provisions specific to quarterly PM performance testing are summarized Table 4.2 below:

TABLE 4.2 ADDITIONAL PM PROVISIONS[1] FOR QUARTERLY TESTING		
Citation	**Description**	**Compliance Methodology**
What are my general requirements for complying with this subpart?		
40 CFR 63.10000(c)	An initial performance test is required for all pollutants to demonstrate compliance and to monitor for continuous compliance with the applicable emission limit, quarterly testing must be conducted.	NGS will conduct initial performance tests within 180 days of the compliance date and quarterly tests thereafter, as appropriate.
What are my initial compliance requirements and by what date must I conduct them?		
40 CFR 63.10005(a)(1)	Stack tests generally consist of three runs at specified process operating conditions using approved methods. If complying with out output-based emission limit, collect hourly electrical load data.	NGS will conduct all stack tests using approved EPA methods and under the operating conditions indicated by the MATS rule or the method. Electrical load data will be collected if necessary.
40 CFR 63.10005(b)	Performance test requirement for tests conducted prior to the compliance demonstration.	NGS is not planning to use performance test data from previous tests.
When must I conduct subsequent performance tests or tune-ups?		
40 CFR 63.10006 (f)	Quarterly performance tests must be completed within 80 to 100 calendar days after the previous performance test.	Quarterly tests will be conducted within the 80 to 100 calendar day timeframe.
What methods and other procedures must I use for the performance tests?		
40 CFR 63.10007(a)(2)	When conducting testing, operate the unit at maximum normal operating load during each performance test. Maximum normal operating load is generally 90 to 110 percent of the design capacity but should be representative of site specific normal operations.	NGS will operate at maximum normal operating load during each performance test.
40 CFR 63.10007(b)	Each test must be conducted in accordance with the requirements of Table 5.	NGS will follow the requirements of Table 5 for the PM testing.
40 CFR 63.10007(d), (e)(1)	Tests must consist of 3 runs, as specified in 63.7(e)(3) and with the minimum sampling time or volume specified in Table	NGS will conduct tests in accordance with 63.7 and Table 2.

[1] These provisions will only be applicable if NGS choses quarterly testing as a continuous monitoring method. All other applicable PM provisions were already addressed in the January 2015 Title V Renewal Addendum.

	2.	
How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?		
40 CFR 63.10021(d)(1), (2)	Performance tests may be skipped during quarters operating less than 168 hours, but a test must be conducted at least annually; tests will be conducted as defined in Table 5 and the results must be in the units of the applicable limit.	NGS will conduct tests during the applicable quarters and will submit results in the applicable units.
What notifications must I submit and when?		
40 CFR 63.10030(d)	A Notification of Intent must be submitted ate least 30 days before a performance test is scheduled to begin.	NGS will submit Notifications of Intent as required.
40 CFR 63.10030(e)	Must submit a Notification of Compliance Status as required in 63.9(h)(2)(ii).	NGS will submit a Notification of Compliance Status.

APPENDIX A
NNEPA MATS COMPLIANCE EXTENSION LETTER

U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Navajo Nation Environmental Protection Agency
P.O. Box 339
Window Rock, AZ 86515

JAN 27 2014

Mr. Robert Talbot
Manager
Navajo Generating Station
Salt River Project
P.O. Box 850
Page, Arizona 86040

Re: Mercury and Air Toxics Standards Compliance Extension Request for Navajo Generating Station

Dear Mr. Talbot:

The Navajo Nation Environmental Protection Agency ("NNEPA") and Region IX of the United States Environmental Protection Agency ("USEPA") are in receipt of your letter dated June 28, 2013, as supplemented on December 19, 2013, regarding your request for a one year extension for compliance with 40 C.F.R. Section 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units ("MATS") for Navajo Generating Station ("NGS") Units 1-3. Your December 19, 2013 supplement, which NNEPA received on December 24, 2013, was responsive to NNEPA's finding of incompleteness issued to you on October 3, 2013. Your request, in asking for an additional year to achieve compliance with the MATS, identifies technical difficulties with the control technologies being considered and being tested at NGS, including sorbent polymer limitations and unusual equipment corrosion problems. Your request, as supplemented, proposes the following compliance schedule:

1. Salt River Project ("SRP") will submit to NNEPA a title V permit modification application that incorporates the final mercury control strategy by no later than April 1, 2015;

2. SRP will commence construction to incorporate the mercury control strategy on-site by no later than October 1, 2015; and

3. SRP will complete on-site construction and comply with all mercury provisions of the MATS rule by no later than April 16, 2016.

Pursuant to 40 C.F.R. § 63.6(i), NNEPA and USEPA hereby jointly approve your request for a one year extension to April 16, 2016 to comply with MATS at NGS, including the proposed

compliance schedule. This approval is contingent upon SRP submitting: (1) a permit modification application to NNEPA by May 30, 2014 to incorporate the MATS compliance extension and the compliance schedule into the title V permit; (2) progress reports to both NNEPA and USEPA that indicate the status of completion of each step of the compliance schedule within 30 days after the completion date for that step; and (3) a final report to both NNEPA and USEPA within 30 days after the final compliance deadline describing the chosen control technology and demonstrating that it is meeting the MATS requirements.

Notwithstanding the compliance extension and the other conditions of approval as described above, nothing in this approval otherwise changes or modifies any requirements of the MATS as it applies to NGS or its operations.

If you have any questions, please contact either Eugenia Quintana, Environmental Department Manager, at NNEPA at 928-871-7800, or Mark Sims, Air & TRI Enforcement Office, USEPA, at 415-972-3965.

FOR THE NAVAJO NATION ENVIRONMENTAL PROTECTION AGENCY:

Stephen B. Etsitty
Executive Director
NNEPA

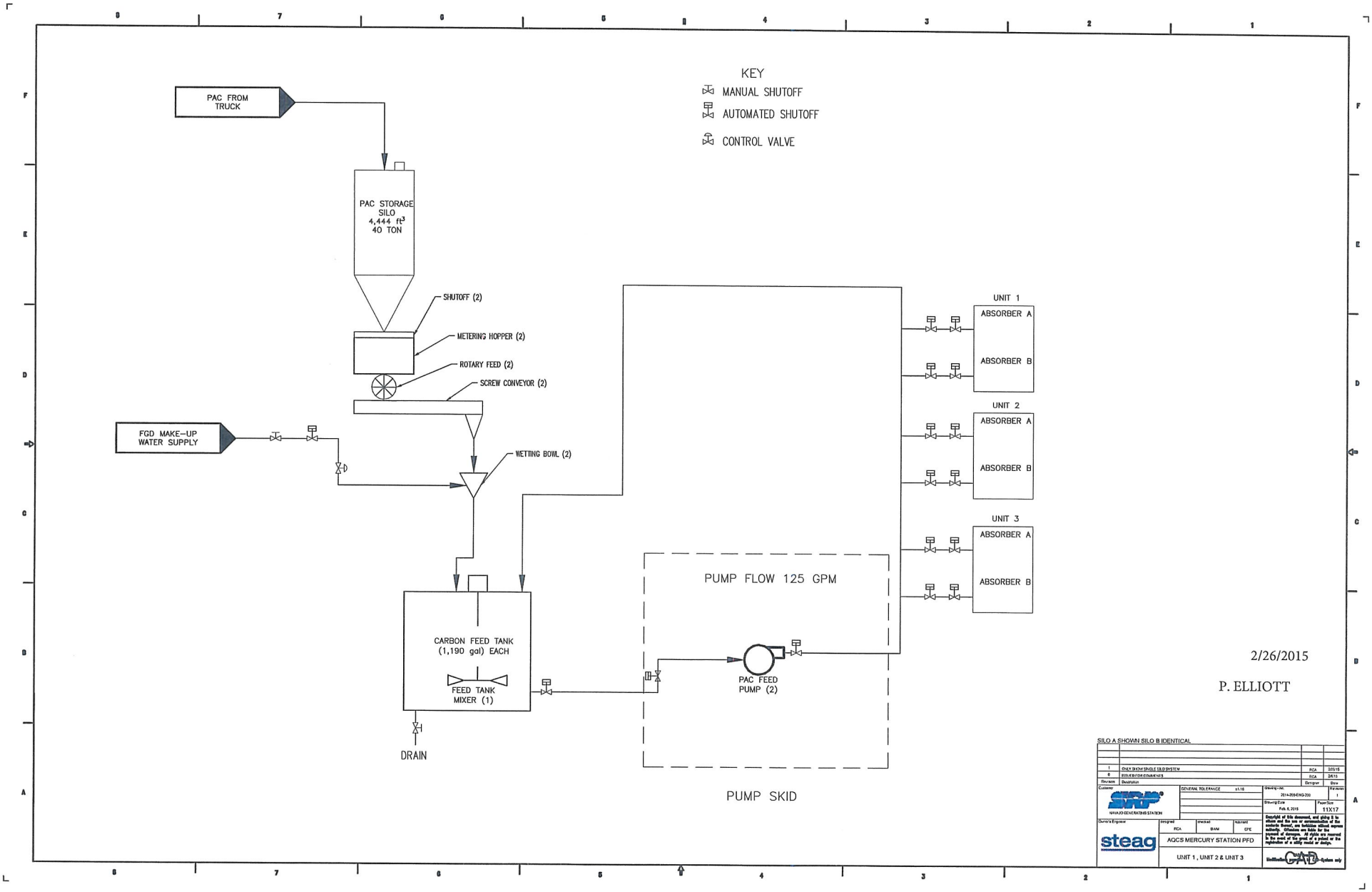
JAN 2 7 2014
Date:

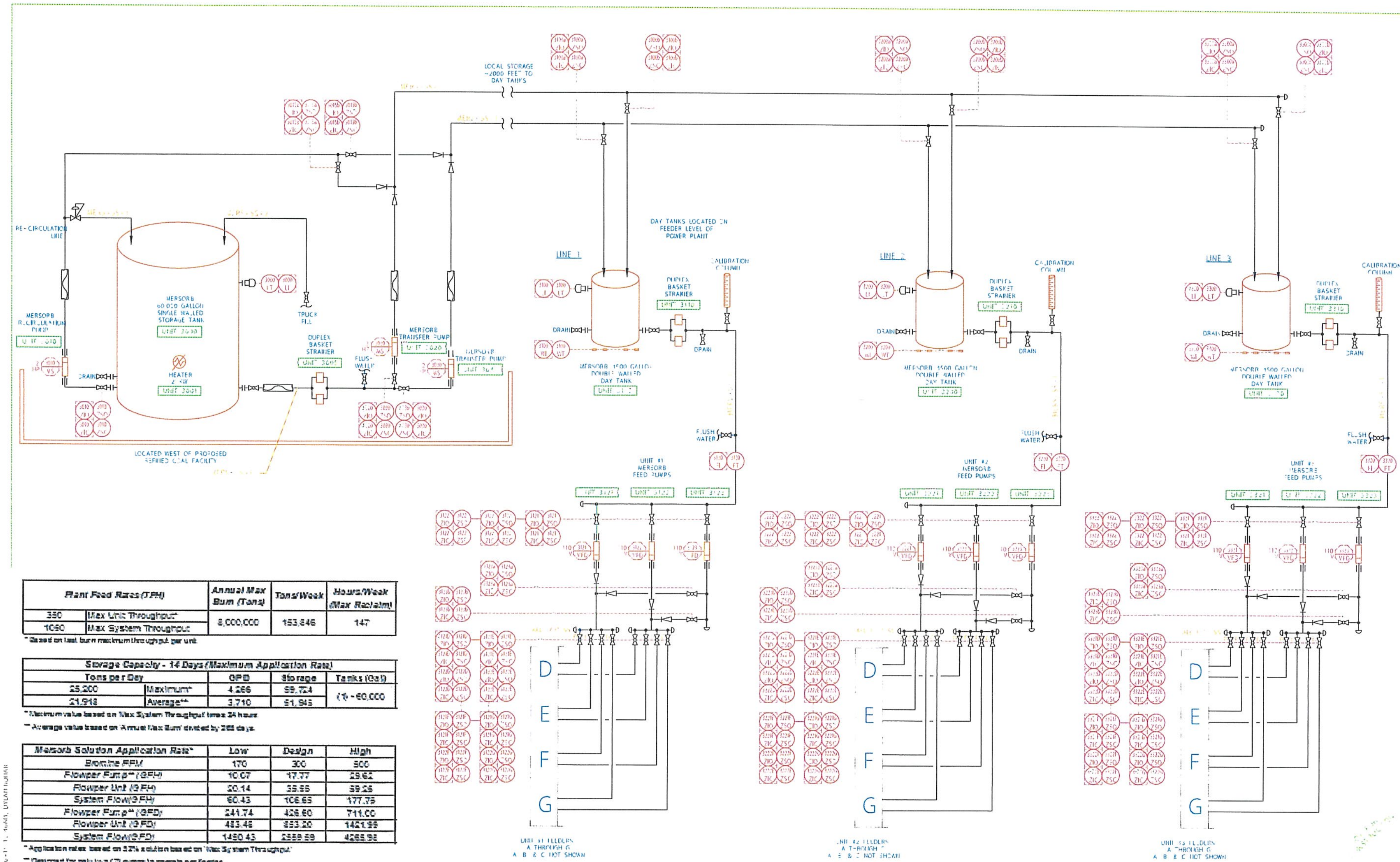
FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Kathleen H. Johnson
Director, Enforcement Division
USEPA Region 9

Date: 1/24/14

APPENDIX B
PROCESS FLOW DIAGRAMS


KEY
MANUAL SHUTOFF
AUTOMATED SHUTOFF
CONTROL VALVE
PAC FROM TRUCK
PAC STORAGE SILO 4,444 ft3 40 TON
SHUTOFF (2)
METERING HOPPER (2)
ROTARY FEED (2)
SCREW CONVEYOR (2)
FGD MAKE-UP WATER SUPPLY
WETTING BOWL (2)
CARBON FEED TANK (1,190 gal) EACH
FEED TANK MIXER (1)
DRAIN
PUMP FLOW 125 GPM
PAC FEED PUMP (2)
PUMP SKID
UNIT 1
ABSORBER A
ABSORBER B
UNIT 2
ABSORBER A
ABSORBER B
UNIT 3
ABSORBER A
ABSORBER B
2/26/2015
P. ELLIOTT
SILO A SHOWN SILO B IDENTICAL
ONLY SHOW SINGLE SILO SYSTEM
ISSUED FOR COMMENTS
GENERAL TOLERANCE ±1/16
NAVAJO GENERATING STATION
steag
AQCS MERCURY STATION PFD
UNIT 1, UNIT 2 & UNIT 3
Feb. 4, 2015
11X17
CAD



Plant Feed Rates (TPH)		Annual Max Burn (Tons)	Tons/Week	Hours/Week (Max Reclaim)
350	Max Unit Throughput*	8,000,000	153,846	147
1050	Max System Throughput			

* Based on last burn maximum throughput per unit

Storage Capacity - 14 Days (Maximum Application Rate)				
Tons per Day		GPD	Storage	Tanks (Gal)
25,200	Maximum*	4,266	59,724	(1) - 60,000
21,918	Average**	3,710	51,945	

* Maximum value based on Max System Throughput times 24 hours

** Average value based on 'Annual Max Burn' divided by 365 days

Mersorb Solution Application Rate*	Low	Design	High
Bromine PPM	170	300	500
Flow per Pump** (GPH)	10.07	17.77	29.62
Flow per Unit (GPH)	20.14	35.55	59.25
System Flow (GPH)	60.43	106.65	177.75
Flow per Pump** (GPD)	241.74	426.60	711.00
Flow per Unit (GPD)	483.48	853.20	1421.99
System Flow (GPD)	1450.43	2559.59	4265.98

* Application rates based on 52% solution based on 'Max System Throughput'

** Designed for only two (2) pumps to operate per feeder.

DESIGN REF.	DRAWING No.	DESCRIPTION
DESIGN		REFERENCE DRAWINGS

REV	BY	DATE	REVISIONS	CHK	DATE	S.L.	DATE
C	DTR	03-27	PERMITTING	ERW	03-27	15	
B	DTR	03-13	OPTION 2.2 SELECTED, GENERAL UPDATE	ERW	03-13	15	
A	DTR	12-12	INITIAL	ERW	12-12	14	

DRA TAGGART DWG No

	APPROVAL	SIGNATURE	DATE
CLIENT			
PROJ. MNGR.			
PROF. ENG.			
PROJECT ENG.			
PROCESS ENG.			
D.O. MNGR.			
SECT. LEADER			
CHECKED			
DRAWN			

DRA TAGGART

TITLE SRP - NAVAJO GENERATING STATION
CALCIUM BROMIDE INJECTION PROJECT
LOCAL STORAGE, FEEDER APPLICATION
FLOWSHEET / P&ID OPTION 2.2

SIZE	DWG No.	REV.	SCALE
D	4819-0001-0003	C	SCALE

APPENDIX C
EMISSION CALCULATIONS

Table C.1: Potential Emissions from Dust Collection Systems

Description	Control Device	Flow Rate (acfm)	PM EF[1] (gr/acf)	PM_{10} EF[1] (gr/acf)	$PM_{2.5}$ EF[1] (gr/acf)	PM Emissions		PM_{10} Emissions		$PM_{2.5}$ Emissions	
						(lb/hr)[2]	(tons/yr)[3]	(lb/hr)[2]	(tons/yr)[3]	(lb/hr)[2]	(tons/yr)[3]
PAC Storage Silo A	Baghouse	1,200	8.80E-04	8.80E-04	8.80E-04	0.0091	0.040	0.0091	0.040	0.0091	0.0396
PAC Storage Silo B	Baghouse	1,200	8.80E-04	8.80E-04	8.80E-04	0.0091	0.040	0.0091	0.040	0.0091	0.0396
Total Emissions from Dust Collection Systems						**0.02**	**0.08**	**0.02**	**0.08**	**0.02**	**0.08**

1) Emission factors based on manufacturers' data (see Appendix D).

2) Emissions (lb/hr) = Flow Rate (acfm) x Emission Factor (gr/acf) x (lb/7,000 grain) x (60 min/hr)

3) Emissions (tons/yr) = Emissions (lb/hr) x 8,760 hr/yr x (1 ton/2,000 lb)

APPENDIX D
DUST COLLECTOR EMISSION INFORMATION

CHEMCO Equipment Company
1500 Industrial Drive
Monongahela, PA 15063

• Tele.: (724) 258-7333 • Fax.: (724) 258-7350
• e-mail: sales@chemcoequipment.com

February 16, 2007

RE: Dust Collector Emission Information

Below is the requested for information on the dust collector. We are proposing to furnish a CHEMCO Model CEC-DC300 dust collector with the following design specifications:

- Filter Area: 300 Square Feet
- Filter Media: Pleated polyester
- Blow In Rate: 750 SCFM
- Fill Cycle Duration: 60-90 Minutes per Fill Cycle
- Cloth Loading: 2.5 SCFM/Square Feet
- Fan Capacity: 1200 SCFM @ 5" W.C.
- Outlet Emissions: .00088 Grains/CF (2mg/M^3)
- Efficiency: 99.9% Based upon an inlet loading of 20 grains/cubic foot

If you need additional information on the dust collector for your air permit application, please advise.

Sincerely,

CHEMCO

Jeffrey A. Tennant

APPENDIX E
NNEPA FORM IE

APPLICATION FOR PART 71 FEDERAL OPERATING PROGRAM

NAVAJO NATION ENVIRONMENTAL PROTECTION AGENCY
NAVAJO NATION AIR QUALITY CONTROL PROGRAM

FORM IE – INSIGNIFICANT EMISSIONS

INSTRUCTIONS: list each source eligible for insignificant treatment under § 71.5(c)(11)(ii). In the "number column indicate the number of units qualifying under each description. Each description must be specific enough to describe the source of emissions. List emission units separately, if they have dissimilar descriptions, including dissimilar capacities or sizes and other factors. Please check the appropriate column to indicate whether the source meets the emissions criteria under § 71.5(c)(11)(ii)(A) and (B) for regulated air pollutants except hazardous air pollutant (RAP, except HAP), and for HAP respectively.

Number	Description of Activities or Emission Units	RAP, except HAP	HAP
1	EG3 - Diesel generator (70 hp)	x	x
1	NPG-529 – Portable diesel generator[1,2,3] (250 kW)	x	x
1	NPG-384 – Portable diesel generator[1,2,3] (105 kW)	x	x
1	NPG-811 – Portable diesel generator[1,2,3] (25 kW)	x	x
1	NPG-818 – Portable diesel generator[1,2,3] (400 kW)	x	x
2	Diesel storage tank (14,000 gal)	x	x
1	Gasoline storage tank (12,000 gal)	x	x
1	Waste oil storage tank (550 gal)	x	x
1	Waste antifreeze storage tank (1,000 gal)	x	x
3	30 wt engine oil storage tank (550 gal)	x	x
3	10 wt engine oil storage tank (550 gal)	x	x
1	Diesel storage tank (2,000 gal)	x	x
2	Diesel storage tank (10,000 gal)	x	x
1	Diesel storage tank (5,040,000 gal)	x	x
1	Diesel storage tank (172,000 gal)	x	x
1	Clean lube oil storage tank (16,000 gal)	x	x
1	Dirty lube oil storage tank (16,000 gal)	x	x
7	Diesel storage tank (200 gal)	x	x
3	Diesel storage tank (400 gal)	x	x
1	Diesel storage tank (350 gal)	x	x
3	Power block turbine lube oil storage tank (7,450 gal)	x	x
9	Power block turbine lube oil / H2 seal oil storage tank (650 gal)	x	x
1	Railroad loop transformer oil storage tank (5,600 gal)	x	x
2	Railroad loop transformer oil storage tank (5,750 gal)	x	x
1	Diesel storage tank (8,000 gal)	x	x
1	Lube oil storage tank (750 gal)	x	x
1	Diesel storage tank (900 gal)	x	x
3	Lube oil storage tank (300 gal)	x	x

3	Used diesel fuel storage tank (500 gal)	x	x
6	Diesel storage tank (100 gal)	x	x
4	Diesel storage tank (500 gal)	x	x
2	Diesel storage tank (150 gal)	x	x
1	Used oil storage tank (550 gal)	x	x
1	Diesel storage tank (140 gal)	x	x
Many	Fab shop lube area storage tanks (100 gal)	x	x
1	Diesel fueling truck tank (550 gal)	x	x
2	Unloaded gasoline fueling truck tank (100 gal)	x	x
1	Diesel fueling truck (500 gal)	x	x
15	Used oil storage tank (540 gal)	x	x
4	Used oil storage tank (260 gal)	x	x
1	Used oil storage tank (150 gal)	x	x
3	Sulfuric acid storage tank (15,000 gal)	x	x
1	Sulfuric acid storage tank (20,000 gal)	x	x
1	Ammonia storage tank (10,000 gal)	x	x
1	Ferric sulfate storage tank (16,000 gal)	x	x
2	Acid or caustic storage tank (24,000 gal)	x	x
2	Sodium hydroxide storage tank (10,000 gal)	x	x
1	Sulfuric acid storage tank (10,000 gal)	x	x
3	Sodium hypochlorite storage tank (4,500 gal)	x	x
2	Powder Activated Carbon Storage Silo (40 ton)	x	x

1. These non-road engines are exempt from the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart IIII) per the definition of "Stationary Internal Combustion Engine" contained in 40 CFR § 60.4219 which specifically excludes non-road engines from this rule.

2. These non-road engines are exempt from the requirements of the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) (40 CFR 63 Subpart ZZZZ) per the definition of "Stationary Reciprocating Internal Combustion Engine" contained in 40 CFR §63.6675.

3. These non-road engines are exempt from the requirements of the Control of Emissions from New and In-use Non-road Compression Ignition Engines (40 CFR §1039), since they were all constructed prior to the applicable model years provided in Table 1 of 40 CFR §1039.1.

APPENDIX F
CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS (CTAC FORM)

NNEPA FORM CTAC REV 0.1 (2008)

APPLICATION FOR PART 71 FEDERAL OPERATING PROGRAM
NAVAJO NATION ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY CONTROL PROGRAM / OPERATING PERMIT PROGRAM

FORM CTAC – CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS BY RESPONSIBLE OFFICIAL

Instruction: One copy of this form must be completed, signed and sent with each submission of documents (i.e. application forms, updates to applications, reports, or any information required by a Part 71 Permit)

Responsible Official - Identify the responsible official and provide contact information.

Name: (Last) Talbot (First) Robert (Middle) K

Title: Plant Manager

Street or Post Office: PO Box 850, NGS010

City: Page State: Arizona Zip: 86040

Telephone: +1 (928) 645-6217 Ext: Facsimile:

Certification of Truth, accuracy and Completeness – The Responsible Official must sign this Statement.

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed):

Name (Print or Typed) Robert K. Talbot Date: 03-31-15